

1 42150/RJP/E264

A TRANSCEIVER METHOD AND SIGNAL THEREFOR EMBODIED IN A CARRIER  
WAVE FOR A FRAME-BASED COMMUNICATIONS NETWORK

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ABSTRACT OF THE DISCLOSURE

A method and signal therfor embodied in a carrier wave for  
sending information from transmit stations to receive stations  
over a transmission medium of a frame-based communications  
10 network. The information is sent in transmit frames having a  
frame format comprising a fixed rate header, followed by a  
variable rate payload, followed by a fixed rate trailer. The  
fixed rate header includes a preamble. The preamble has a  
repetition of four symbol sequences for facilitating power  
15 estimation, gain control, baud frequency offset estimation,  
equalizer training, carrier sensing and collision detection. The  
preamble also includes a frame control field. The frame control  
field has scrambler control information for frame scrambling  
initialization, a priority field to determine the absolute  
20 priority a transmit frame will have when determining access to  
the transmission medium, a payload encoding field which  
determines constellation encoding of payload bits in the variable  
rate payload, and a header check sequence for providing a cyclic  
redundancy check. The variable rate payload is transmitted  
25 pursuant to dynamic adjustable frame encoding parameters for  
improving transmission performance for a transmit frame being  
transmitted from a transmitting station to a receiving station.  
The header also includes a destination address field, a source  
address field and an ethertype field.

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